

# Kingtronics®

# HER301 THRU HER308

## HIGH EFFICIENCY RECTIFIERS

**REVERSE VOLTAGE** 50 to 1000 Volts    **FORWARD CURRENT** 2.0 Ampere

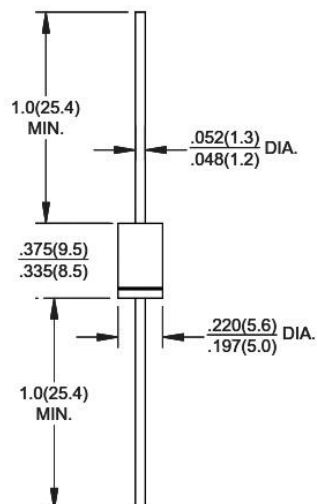
### FEATURES

- Low power loss, high efficiency
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- High reliability
- High temperature soldering guaranteed
- 260°C/10 seconds, 0.375" (9.5mm) lead length at 5 lbs(2.3kg) tension

### MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Polarity: Color band denotes cathode end
- Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
- Mounting position: Any

### DO-201AD (DO-27)



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified ,  
Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load derate current by 20%

Dimensions in inches and (millimeters)

PARAMETER	SYMBOL	HER 301	HER 302	HER 303	HER 304	HER 305	HER 306	HER 307	HER 308	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	300	400	600	800	1000	VOLTS
Maximum RMS Voltage	$V_{RMS}$	35	70	140	210	280	420	560	700	VOLTS
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	300	400	600	800	1000	VOLTS
Maximum average forward rectified current 0.375"(9.5mm) lead length at $T_A=50^\circ\text{C}$	$I_{(AV)}$	3.0								Amp
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	150								Amps
Maximum instantaneous forward voltage at 3.0A	$V_F$	1.0		1.3		1.70				VOLTS
Maximum DC Reverse Current at Rated DC blocking voltage	$I_R$	$T_A = 25^\circ\text{C}$								uA
		$T_A = 100^\circ\text{C}$								
Maximum reverse recovery time (NOTE 1)	$T_{RR}$	50				75				ns
Typical Junction Capacitance (Note 2)	$C_J$	70				50				pF
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150								°C

1- Reverse Recovery Test Conditions:  $I_f=0.5A, I_r=1.0A, I_{rr}=0.25A$ .

2- Measured at 1 MHZ and applied reverse voltage of 4.0 VDC.

**Kingtronics® International Company**

# Kingtronics®

# HER301 THRU HER308

## RATINGS AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

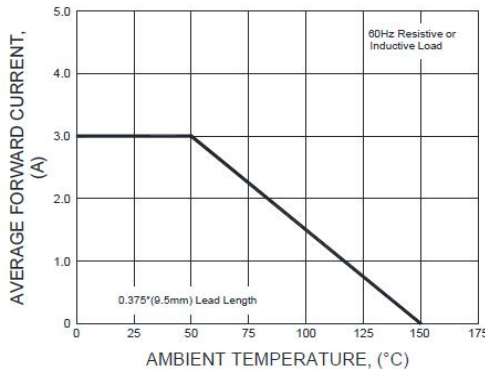


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

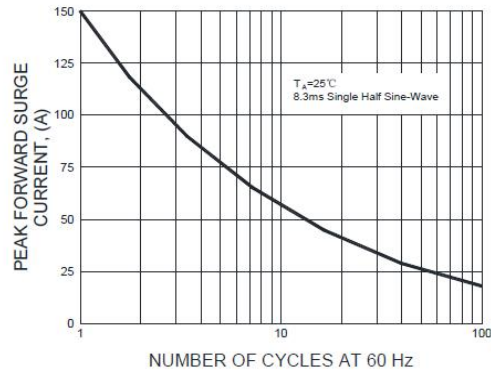


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

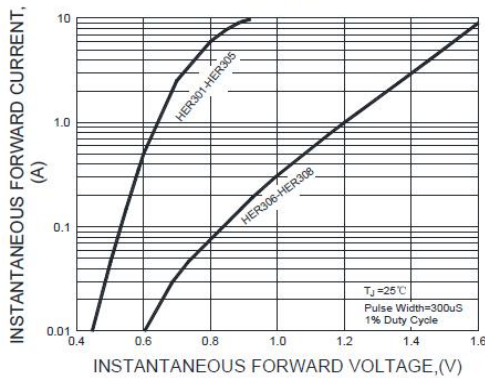


FIG.3-TYPICAL REVERSE CHARACTERISTICS

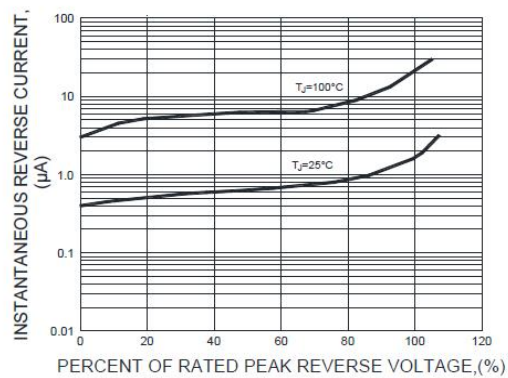


FIG.5-TYPICAL JUNCTION CAPACITANCE

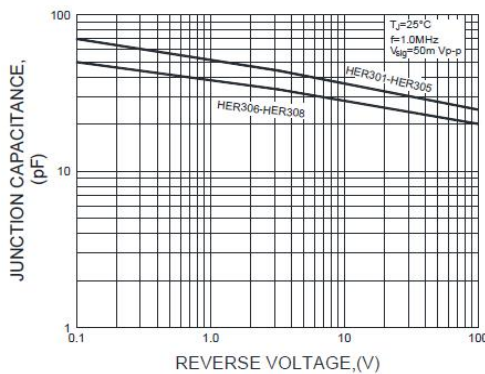
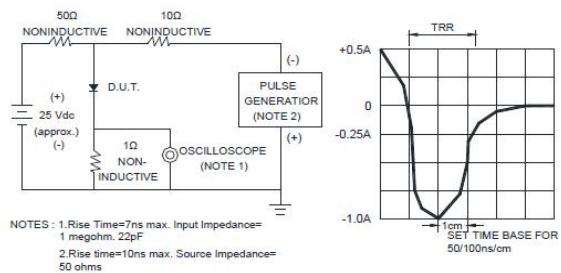


FIG.6-TEST CIRCUIT DIAGRAM AND FORWARD SURGE CURRENT



Note: Specifications are subject to change without notice.

**Kingtronics® International Company**